

Remarks

The Office Action has rejected all pending claims under 35 U.S.C. § 112, claims 41, 43 - 46, 48 - 55 and 57 - 62 under a double-patenting rejection and all claims under 35 U.S.C. § 103. In light of the amendments above and the arguments below, Applicants respectfully request reconsideration.

§ 112 Rejections

Claims 41 - 62 are rejected under 35 U.S.C. § 112, first paragraph on the grounds that

"the specification, while being enabling for methods using the T7 RNA polymerase with the Y639F and the SP6 Y631F RNA polymerase mutations does not reasonably provide enablement for any possible T7-type RNA polymerase with reduced discrimination for non-canonical versus canonical nucleotides."

Applicants have amended claims 41 and 55 to include the limitations of claims 42 and 56. Applicants point out that the specification addresses specifically how one would examine these polymerases and provide methods for the isolation of additional mutations. The Examiner's attention is drawn to the specification beginning at page 19, line 10. The Examiner is specifically directed to page 22, line 11 where a description of aligning the amino acid sequence of the T7-like RNA polymerase and identifying which position corresponds to the Y639

position in T7 RNA polymerase. Applicants assert that this is well within one of skill in the art.

Although the Examiner has characterized the field of RNA polymerases as "unpredictable," Applicants note that the RNA polymerases in question are conserved in these regions and one of skill in the art would readily believe that a similar substitution or mutation would create a polymerase with appropriate functionality. The Examiner does describe the work of Rui Sousa in screening polymerases. However, once the mutation is found, it is reasonable to believe that this same mutation will create polymerases of similar functionality in conserved regions. Applicants point out that they are not asking one of skill in the art to recreate a new mutation. They are only instructing one of skill in the art to align known sequences and identify a position which corresponds to Applicants' mutation.

Claims 41 - 45 and 55 - 59 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite. Applicants have removed the phrase "de novo." Applicants meant for the phrase to refer synthesis of a new strand using a template and understand the claim to be clearer without the use of the phrase.

Double Patenting

Applicants have enclosed a Terminal Disclaimer in compliance with the Examiner's request.

§ 103 Rejections

Claims 41 - 54 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Axelrod, et al. in view of Sousa, et al. and further in view of Innis, et al.

Claims 55, 56, 57, 60, 61 and 62 are rejected under 35 U.S.C. § 103 as being unpatentable over Koster, et al. in view of Sousa, et al. Claims 58 and 59 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sousa, et al. in view of Stratagene Catalog.

Applicants have chosen to address all these references together because the Examiner shares a reliance of the Sousa, et al., 1995 reference.

Applicants note that their earliest priority date is for 08/713,331, filed September 13, 1996 and issued as U.S. Pat. 5,849,546. The author of Sousa, et al. is the same Sousa who is an inventor of the above-identified application. Applicants have enclosed a copy of a § 132 Declaration (first submitted in priority application 08/713,331) removing Sousa, et al. as prior art.

Applicants note that the Examiner has independently rejected claims 58 and 59 under 35 U.S.C. § 103 as being

unpatentable over Kostyuk. While not agreeing with the Examiner's assessment of the Kostyuk and Stratagene references, Applicants have chosen to cancel these claims in order to further speed prosecution.

A Petition and Fee for Three Months Extension of Time is enclosed. If further fees are necessary, please charge Deposit Account 17-0055.

Respectfully submitted,

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